

## Painting and Coating Workers (except Const. and Maintenance)

### Table of Contents *(scroll or use links below to navigate document)*

<a href="#">What They Do</a>	<a href="#">Trends</a>
<a href="#">Tasks</a>	<a href="#">Training</a>
<a href="#">Skills, Knowledge, and Abilities</a>	<a href="#">Where Do I Find the Job?</a>
<a href="#">Work Environment</a>	<a href="#">Where Can the Job Lead?</a>
<a href="#">California's Job Outlook and Wages</a>	<a href="#">Other Sources</a>

### What They Do

*Coating, Painting, and Spraying Machine Setters, Operators, and Tenders* control the machinery that applies paints and coatings to a wide range of manufactured products such as food products, glassware, cloth, ceramic, metal, plastic, paper, and wood products. Many paints and coatings have a dual purpose of enhancing product appearance and providing protection from weather or corrosion. Products may be painted or coated with a variety of finishes: lacquer, silver, and copper solution, rubber, paint, varnish, glaze, enamel, oil, or rust-proofing materials.

Spraying Machine Operators use spray guns to coat products. They follow a formula to fill equipment tanks with a mixture of paints or chemicals. They adjust nozzles on the spray guns to obtain the proper dispersion of the spray and hold or position the guns to direct the spray onto the object. Spraying Machine Operators also check the flow of the paint or solution and visually inspect the quality of the coating. These workers regulate the temperature and air circulation in drying ovens while products are drying.

*Painters, Transportation Equipment* refinish old and damaged cars, trucks, and buses in automotive body repair and paint shops. They perform intricate, detailed work and mix paint to match the original vehicle color. Transportation Equipment Painters are considered among the most highly skilled manual spray operators. Painters use power sanders and sandpaper to remove the original paint or rust and then fill small dents and scratches with body filler. They remove parts and trim that are not to be painted. Equipment or Automotive Painters use a spray gun to apply several coats of paint. They apply lacquer, enamel, or water-based primers to vehicles with metal bodies and flexible primer to newer vehicles with plastic body parts. Painters apply successive paint coats with a spray gun until the finish of the repaired sections match that of the undamaged portions of the vehicle. They may place the painted vehicle or parts under heat lamps or in an infrared oven to speed drying. Equipment or Automotive Painters sand the surface after each coat of primer dries to remove any imperfections. Final sanding of the primer coats is done by hand with a fine grade of sandpaper. Then Painters apply a sealer and a final topcoat.

### Tasks

*Coating, Painting, and Spraying Machine Setters, Operators, and Tenders*

- ▶ Observe machine operation and gauges to detect defects or deviations from standards.
- ▶ Fill hopper, reservoir, trough, or pan with material used to coat, paint, or spray, using conveyor or pail.
- ▶ Measure and mix specified quantities of substances to create coatings, paints, or sprays.
- ▶ Thread or feed item or product through or around machine rollers and dryers.

## Painting and Coating Workers (except Const. and Maintenance)

- ▶ Set up and operate machines to paint or coat products with such materials as silver and copper solution, rubber, paint, glaze, oil, or rust proofing materials.
- ▶ Remove materials, parts, or workpieces from painting or coating machines, using hand tools.
- ▶ Record operational data on specified forms.
- ▶ Clean and maintain coating and painting machines, using hand tools.

### *Painters, Transportation Equipment*

- ▶ Adjust controls on infrared ovens, heat lamps, portable ventilators, and exhaust units in order to speed the drying of vehicles between coats.
- ▶ Allow the sprayed product to dry, and then touch up any spots that may have been missed.
- ▶ Apply designs, lettering, or other identifying or decorative items to finished products, using paint brushes or paint sprayers.
- ▶ Apply primer over any repairs made to vehicle surfaces.
- ▶ Apply rust-resistant undercoats, and caulk and seal seams.
- ▶ Buff and wax the finished paintwork.

Detailed descriptions of these occupations may be found in the Occupational Information Network (O\*NET) at [online.onetcenter.org](http://online.onetcenter.org).

## Important Skills, Knowledge, and Abilities

### *Coating, Painting, and Spraying Machine Setters, Operators, and Tenders*

- ▶ **Production and Processing** — Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.
- ▶ **Mechanical** — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- ▶ **Chemistry** — Knowledge of the chemical composition, structure, and properties of substances and of the chemical processes and transformations that they undergo. This includes uses of chemicals and their interactions, danger signs, production techniques, and disposal methods.
- ▶ **Mathematics** — Using mathematics to solve problems.
- ▶ **Operation Monitoring** — Watching gauges, dials, or other indicators to make sure a machine is working properly.
- ▶ **Equipment Selection** — Determining the kind of tools and equipment needed to do a job.
- ▶ **Control Precision** — The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.
- ▶ **Problem Sensitivity** — The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.
- ▶ **Manual Dexterity** — The ability to move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.
- ▶ **Trunk Strength** — The ability to use your abdominal and lower back muscles to support part of the body repeatedly or continuously over time without 'giving out' or fatiguing.
- ▶ **Near Vision** — The ability to see details at close range (within a few feet of the observer).

## Painting and Coating Workers (except Const. and Maintenance)

### Painters, Transportation Equipment

- ▶ Mechanical — Knowledge of machines and tools, including their designs, uses, repair, and maintenance.
- ▶ Equipment Selection — Determining the kind of tools and equipment needed to do a job.
- ▶ Operation and Control — Controlling operations of equipment or systems.
- ▶ Visual Color Discrimination — The ability to match or detect differences between colors, including shades of color and brightness.
- ▶ Arm-Hand Steadiness — The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.
- ▶ Gross Body Equilibrium — The ability to keep or regain your body balance or stay upright when in an unstable position.
- ▶ Dynamic Flexibility — The ability to quickly and repeatedly bend, stretch, twist, or reach out with your body, arms, and/or legs.
- ▶ Near Vision — The ability to see details at close range (within a few feet of the observer).

### Work Environment

Coating and Painting Workers usually work indoors in special ventilated booths. They may be exposed to dangerous fumes from paint and coating solutions. However, the risk is minimal if Painters wear masks or respirators that cover their noses and mouths and adhere to safety rules. Operators may stand for long periods of time. When using a spray gun, they may have to bend, stoop, or crouch in uncomfortable positions to reach different parts of an object. Most Coating and Painting Workers generally work a 40-hour week. Self-employed automotive painters sometimes work more than 50 hours a week depending on the number of vehicles customers want repainted.

Many Transportation Equipment Painters working for large manufacturers or motor vehicle dealers belong to unions including the International Brotherhood of Painters and Allied Trades, the International Brotherhood of Teamsters, and the Sheet Metal Workers International Association.

### California's Job Outlook and Wages

The California Outlook and Wage table below represents the occupations across all industries.

Standard Occupational Classification	Estimated Number of Workers 2004	Estimated Number of Workers 2014	Average Annual Openings	2006 Wage Range (per hour)
<b>Coating, Painting, and Spraying Machine Setters, Operators, and Tenders</b>				
51-9121	9,500	9,600	260	\$9.21 to \$16.11
<b>Painters, Transportation Equipment</b>				
51-9122	6,900	8,400	330	\$13.98 to \$24.80

*Wages do not include self-employment.*

*Average annual openings include new jobs plus net replacements.*

*Source: [www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov), Employment Projections by Occupation and OES Employment & Wages by Occupation, Labor Market Information Division, Employment Development Department.*

## Painting and Coating Workers (except Const. and Maintenance)

### Trends

Employment of Coating, Painting, and Spraying Machine Setters, Operators, and Tenders is expected to grow slower than average over the 2004–2014 period. However, opportunities will continue to arise from the need to replace workers who retire or leave the labor force for other reasons.

Employment of Transportation Equipment Painters is expected to grow faster than average for all occupations over the 2004–2014 period. The demand for highly skilled transportation painters and auto refinishers will be greater than for lesser-skilled Painting, Coating, and Spraying Machine Operators. The detailed work of refinishing automobiles in repair shops does not lend itself to automation. Automotive painters can expect relatively steady work because automobiles damaged in accidents require repair and refinishing regardless of the state of the economy.

### Training/Requirements/Apprenticeships

Coating, Painting, and Spraying Machine, Operators, and Tenders; and Painters, Transportation Equipment usually follow one of the following training paths:

- ▶ High school diploma preferred
- ▶ Adult education
- ▶ Vocational school
- ▶ Community college programs/certificates
- ▶ Extensive on-the-job training

A high school diploma is not required, but it is helpful. Many community colleges and vocational or technical schools offer instructional programs that enhance employment and advancement opportunities.

Voluntary certification for automotive painters is available through the National Institute for Automotive Service Excellence. To obtain certification, painters must pass a written exam and have at least two years experience in the field. Painters must take the exam every five years to recertify.

### Recommended High School Course Work

High school preparation courses in art, shop, auto shop, accounting, chemistry, general business, business mathematics, and computer technology are helpful. Accounting and business classes are particularly helpful for those who plan to enter self-employment.

### Where Do I Find the Job?

Direct application to employers remains one of the most effective job search methods. Unions representing Transportation Equipment Painters also have information concerning apprenticeships and related matters.

Use the *Search for Employers by Industry* feature on the *Career Center* page at [www.labormarketinfo.edd.ca.gov](http://www.labormarketinfo.edd.ca.gov) to locate employers in your area. Search under the following industry names to get a list of private firms and their addresses:

- ▶ Electroplating/Anodizing/Coloring Metal
- ▶ Fabricated Structural Metal
- ▶ Institutional Furniture
- ▶ Metal Coating and Nonprecious Engraving
- ▶ Nonupholstered Wood Household Furniture
- ▶ Ornamental and Architectural Metal Work
- ▶ Plate Work
- ▶ Prefabricated Metal Building & Component

## Painting and Coating Workers (except Const. and Maintenance)

- ▶ Metal Heat Treating
- ▶ Metal Window and Door
- ▶ Sheet Metal Work
- ▶ Wood Kitchen Cabinets and Countertops

Search these **yellow page** headings for listings of private firms:

- ▶ Automobile Body Repairing and Painting
- ▶ Automotive Painting
- ▶ Coatings, Protective
- ▶ Painting Consultants
- ▶ Coating Contractors

### Where Can the Job Lead?

Experienced Painting and Coating workers with leadership ability may become team leaders or supervisors. Those who acquire practical experience, college, or other formal training may become sales or technical representatives for chemical or paint companies.

Most Transportation Equipment Painters start as helpers and learn their skills on the job. It usually takes one to two years of on-the-job training to become skilled in all phases of automotive painting. As helpers gain experience they progress to more complicated tasks such as mixing paint to attain a good match. Some automotive painters may open their own shops.

### Other Sources of Information

National Association of Manufacturers  
[www.nam.org](http://www.nam.org)

National Institute for Automotive Service Excellence  
[www.ase.com](http://www.ase.com)

National Paint & Coatings Association  
[www.paint.org](http://www.paint.org)

International Brotherhood of Teamsters  
[www.teamster.org](http://www.teamster.org)

International Union of Painters and Allied Trades  
[www.iupat.org](http://www.iupat.org)

